

very interesting peculiarities. Its axis is formed by a hard polypary, resembling *Corallium rubrum* in appearance, except that its colour is a greyish white. A transverse section of this polypary shows that it is not calcareous throughout, but formed of regularly alternating concentric layers of white calcareous matter, and a black substance, analogous to the horny matter (*corneine*) which forms the axis of the *Gorgoniæ*. The polypes are eight-armed. Their cœnenchyma is covered with calcareous scales, and their mouth is surrounded by eight valvules, which are likewise calcareous. These characters approximate it to the *Primnoæ* (*P. lepadifera*), which alone among the octactinian polypes are furnished with a hard covering of this kind. The genus *Primnoa* belongs to the *Gorgonidæ*. This family, according to Milne-Edwards, shares with that of the *Isidinæ* in the character of possessing a sclerobasic axis wholly or partially soft, of a horny or corklike texture, in opposition to the *Corallinidæ*, in which the common axis is entirely stony. Milne-Edwards adds that in the *Gorgonidæ* a little carbonate of lime is sometimes united with the corneine, but that this salt never predominates in such a manner as to give the axis a stony consistence, like that of coral. *Lithoprímnoa*, however, forms an exception to this rule, and the characters of the family must therefore be modified. It will also be necessary to give up the subdivision of the *Gorgonidæ* into *Gorgonaceæ* and *Gorgonelluceæ*. The former of these groups was characterized by the horny consistence of the sclerobasic axis, whilst in the second this axis should be cerato-calcareous. The author shows that the quantity of carbonate of lime is too variable to admit of such a distinction.

M. Grube remarks, in passing, that a great part of the chemical characters ascribed to corneine by Valenciennes are inexact, or not generally applicable. Valenciennes states, for example, that corneine is insoluble in caustic potash with the aid of heat. M. Lothar Meyer has found it to be constantly soluble in that agent.—*Bibl. Univ.* March 1863, *Bull. Sci.* p. 240.

*On the Crustacea which live in Species of Ascidians.*

By T. THORELL.

We have hitherto known only a small number of Crustacea parasitic on the Molluscoïda. Düben was the first to describe a *Lernæa* living on a compound Ascidian of the Norwegian coast. Subsequently Claus found a *Sapphirina* inhabiting the respiratory cavity of *Salpæ*; and Allman described, under the generic name of *Notodelphys*, a new type of parasites from the respiratory cavity of the simple Ascidians; lastly, Leuckart found a Crustacean of the genus *Notopterophorus* of Costa in the respiratory cavity of a *Phallusia*. Incited by these observations, Thorell has studied the Ascidians of the shores of Bohuslaen in regard to their Crustacean parasites. Of these he has found twenty species, nineteen of which are new. By far the greater part belong to the two families *Notodelphyidæ* (13 species) and *Sapphirinidæ* (4 species).

The family *Notodelphyidæ* thus gains greatly in importance. The

first species of this family (*Notodelphys ascidicola*) discovered by Allman was regarded by that naturalist as closely allied in its organization to the free Copepoda, although its mode of life and some modifications in the buccal and natatory appendages seemed to approximate it to the parasitic Crustacea (Siphonostoma). He regarded it as a free Copepod living in the respiratory cavity of an Ascidian, as the *Pinnotheres* are true Brachyurous Decapods residing in the cavity of the mantle of the *Pinnæ*. This view is now confirmed by Thorell, who detects a nearly perfect identity between the appendicular organs of the *Notodelphyidæ* and those of the free Copepoda.

These little Entomostraca are found clinging to the inner wall of the respiratory sac of the Ascidiæ by means of the antennæ of the second pair. Only one species (*Botachus cylindricus*, Thor.) resides between the two lamellæ of this sac. Notwithstanding this parasitic mode of life, they possess buccal appendages adapted for mastication. They appear, therefore, to derive their nourishment, not from the fluids of the Ascidian, but from the Infusoria and organic particles which float in the circumambient water. The most remarkable peculiarity of structure presented by these animals is that which gave occasion to the name of *Notodelphys*, given to them by Allman. It consists in the presence, in the females, of a pouch situated beneath the integuments of the back, and destined for the reception of the ova on their emission from the ovary. This pouch therefore replaces the external ovigerous sacs of the other Copepoda.

The present memoir contains a new classification of the Copepoda, which, according to the author, include the Siphonostoma. In this he concurs with Steenstrup and Lütken. He divides these Crustacea into three series—Gnathostoma, Pæcilostoma, and Siphonostoma. The second of these, establishing the passage between the masticatory (Gnathostoma) and the sucking Copepoda (Siphonostoma) is of new formation. It includes the *Corycæidæ*, *Ergasilidæ*, *Sapphirinidæ*, *Miracidæ*, and some other small families. It is distinguished from the Siphonostoma by the want of the sucker, and from the Gnathostoma by the absence of mandibles.—*Kongl. Vetensk. Akad. Handl.* iii. No. 8; *Bibl. Univ.* March 1863, p. 235.

*Characters of a new Species of Sedge-Warbler (Calamoherpe Newtoni) from Madagascar.* By Dr. G. HARTLAUB.

♂. *Supra obscurius olivacea, subunicolor, subtus multo pallidior, medio subflavicans; mento gulaque albidis; jugulo maculis longitudinalibus fuscis conspicue notato; subalaribus flavo-albidis; subcaudalibus obscuris; maxilla fusca, mandibula obscure aurantiaco-rubente; ore interno late aurantiaco; iride helvola; ala brevi; cauda longa, rotundata, rectricibus cingustatis, apice rotundato-attenuatis.*

Long.  $6\frac{1}{3}''$ ; rostr. a fr.  $6\frac{1}{4}'''$ ; rostr. a rict.  $9'''$ ; al.  $2'' 7'''$ ; caud.  $3''$ ; tars.  $11'''$ .

Two male specimens of this unquestionably new species were collected by Mr. Edw. Newton near Soamandrikazay, in the island of Madagascar.—*Proc. Zool. Soc.* May 12, 1863.